Please amend the claims as shown in the List of Claims as follows.

List of Claims

1. (Currently amended) A transgenic Dunaliella Salina bioreactor comprising:
Dunaliella Salina ~~as host~~,
transformed to provide transgenic Dunaliella Salina with a foreign target gene selected from the group consisting of tumor necrosis factor (TNF) and hepatitis B surface antigen (HBsAg); and a selectable marker selected from the group consisting of the aadA gene encoding for spectinomycin or streptomycin resistance, and BAR gene encoding for herbicide phosphinothricin (PPT) resistance;
culturing the transgenic Dunaliella Salina in a culture medium selected from the group consisting of Mclachlan culture fluid and a combination culture fluid A comprising 5mM NH_4Cl and 5mM $NaNO_s$ and culture fluid B containing 10mM $NaNO_s$ to express the foreign target gene.

2. (cancelled)

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (Currently amended) A method for preparing a transgenic Dunaliella Salina bioreactor, comprising the following steps:

   (a) transforming the cells of Dunaliella Salina to provide transgenic Dunaliella Salina by introducing into the cells of Dunaliella Salina an expression vector comprising a foreign target gene selected from the group consisting tumor necrosis factor gene and hepatitis surface antigen gene; together with a selectable marker selected from the group consisting of aadA gene encoding for spectinomycin or

streptomycin resistance, BAR gene encoding for herbicide phosphinothricin (PPT) resistance; and

(b) culturing the transgenic Dunaliella Salina in a liquid medium selected from the group consisting of Mclachlan culture fluid, and a combination culture fluid A comprising 5mM NH_4Cl and 5mM $NaNO_s$ and culture fluid B containing 10mM $NaNO_s$; and

(c) screening the cells of transgenic Dunaliella Salina for expression of the selectable marker showing transformation and expression of the foreign target gene.

7. (Previously presented) A method as claimed in step (a) of claim 6, wherein the cells of Dunaliella Salina were transformed by a method selected from the group consisting of a physical and a chemical method.

8. (cancelled)

9. (Previously presented) The method according to claim 7, wherein said physical method is selected from the group consisting of electroporation, use of a gene gun and wherein said chemical method is selected from the group consisting of PEG-mediated transformation.

10. (cancelled)

11. (cancelled)

12. (Currently amended) The method according to claim 6 wherein the cells of ~~transformation is by construction of a~~ Dunaliella Salina are transformed by introducing an expression vector containing a foreign target gene selected from the group consisting of a ~~fragment of~~ TNF gene and HBsAg gene. ~~and transforming the cells of Dunaliella Salina with the Dunaliella Salina expression vector~~

13. (Currently amended) The method according to claim 12, wherein the Dunaliella Salina expression vector is constructed by the steps:

(a) cloning the Dunaliella Salina chloroplast atpA 5' promoter sequence and rbcL 3' terminator sequence;

(b) constructing a plasmid pUC19-TNF containing ~~a~~ cDNA ~~fragment~~ of TNF;

(c) digesting the plasmid pUC19-TNF with a restriction endonuclease to provide an intermediate vector pSK-atpK-TNF for an expression cassette of the TNF cDNA ~~fragment~~;

(d) Constructing a vector p64C containing a cloned homologous fragment of the Dunaliella Salina chloroplast gene, clpP-trnI-petB, together with a chlL gene encoding the 5' promoter and the 3' terminator of the chlL gene;

(e) Inserting the expression cassette of TNF cDNA ~~fragment~~ into the p64C vector to provide an intermediate chloroplast expression vector, p64C-atpX-TNF;

(f) Locating the expression cassette of TNF cDNA ~~fragment~~ downstream of the chlL 5' promoter;

(g) Constructing an expression cassette of aadA gene encoding for spectinomycin resistance; and

(h) Constructing a chloroplast expression vector comprising the expression cassette of TNF cDNA ~~fragment~~ and the expression cassette of aadA gene.

14. (Currently amended) The method according to claim 12 wherein the target gene is HBsAg comprising the steps:

(a) amplifying a SS1 fusion gene ~~fragment~~ comprising the fusion of a gene ~~fragment~~ encoding amino acid residues 1-226 of HBsAg and a PreS1 gene ~~fragment~~ encoding amino acid residues 20-48 of PreS1 of hepatitis B viral gene and ligating the fusion gene at Sal I/SphI site ~~to obtain SS1 fusion gene~~;

(b) Constructing a plasmid, pUC18-CtxB-SS1, comprising CtxB gene of cholera toxin B subunit gene and the SS1 fusion gene;

(c) cloning the 5' promoter and the T-Nos terminator of a heat shock protein, Hsp70B of Dunaliella Salina to obtain plasmid pSP72-Hsp-Nos;

(d) Ligating the pUC18-CtxB-SS1 into plasmid pSP72-Hsp-Nos between the 5' promoter and the T-Nos terminator sequences to obtain an expression cassette of CtxB-SS1;

(e) Constructing an expression cassette expressing nitrate reductase (Nit1) and inserting it into an expression cassette comprising MAR1 and MAR2 of the matrix attachment regions of a Dunaliella Salina expression vector PCAMBRIA-OS1644 in the same orientation;

(f) Constructing a BAR expression cassette expressing BAR encoding for PPT resistance;

(g) Integrating the expression cassettes, Nit1, CtxB-SS1 and BAR to an active transcription region of Dunaliella Salina chromosome.